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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/614,302

07/03/2003

Andreas Kaupert

(E) 1840 US

8262

7590 12/17/2008
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EXAMINER

MERKLING, MATTHEW J

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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12/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/614,302	Applicant(s) KAUPERT ET AL.	
	Examiner MATTHEW J. MERKLING	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Pettit (US 6,232,005).

Regarding claim 1, Pettit discloses an evaporator arrangement, including a porous evaporator medium (76), a hydrocarbon supply duct arrangement (118) for supplying liquid hydrocarbon to the porous evaporator medium (76), and also a mixing material conducting arrangement (90) for conducting through the evaporator medium (76) at least a portion of the mixing material provided for mixture formation.

Regarding claim 2, Pettit further discloses the evaporator medium (76) has numerous mixing material passage apertures (porous medium, has several passage apertures).

Regarding claim 3, Pettit further discloses an electrically operable heating device (78) is associated with the evaporator medium (76).

Regarding claim 4, Pettit further discloses the heating device (78) is arranged, in relation to the flow of mixing material through the evaporator medium (76), on an upstream side of the evaporator medium (see Fig. 2) and in

heat transfer contact therewith (electric heater is in heat transfer contact with the porous medium, see Fig. 2).

Regarding claim 5, Pettit further discloses the heating device (78) has associated with it a screening arrangement (80) to screen it off from the mixing material flowing to the evaporator medium (76)

Regarding claim 6, Pettit further discloses the screening arrangement (80) includes a screening plate (80) having mixing material passage apertures (its porous, therefore it contains passage apertures).

Regarding claim 7, Pettit further discloses the heating device (78) has a heating element which runs at least locally curved or spirally (see Fig. 4, heating element is curved/circular).

Regarding claim 8, Pettit further discloses the evaporator medium (76) is at least partially arranged in a spatial region surrounded by the heating element (78, see Fig. 4).

Regarding claim 9, Pettit further discloses an electrically operable mixing material heating device (78) is provided in an upstream region - in relation to the throughflow of the mixing material through the evaporator medium (76, see Fig. 2) - of the mixing material conducting arrangement (90) and spaced apart from the evaporator medium (76, see Fig. 2).

Regarding claim 10, Pettit further discloses a mixing/combustion chamber (70) is provided downstream of the evaporator medium (76) with respect to the flow of mixing material through the evaporator medium (76), and the mixture

introduced into the said chamber can be ignited therein by means of an ignition member (a combustible fluid can be ignited by a ignition member).

Regarding claim 11, Pettit further discloses a heat exchanger arrangement (110) for the transfer of process heat out to the mixing material provided for mixture formation (see Fig. 2 where heat is transferred from the mixing material to the incoming mixture formation fluid).

Regarding claim 12, Pettit further discloses a reformer (2) for the recovery of hydrogen from a hydrocarbon/mixing material mixture, comprising an evaporator arrangement (in combustor 28, see Fig. 1) according to claim 1.

Regarding claim 14, Pettit further discloses a heating device for heat generation by combustion of a hydrocarbon/mixing material mixture (in chamber 70, see Fig. 2), comprising an evaporator arrangement according to claim 1 (as described above in claim 1), for the production of the hydrocarbon/mixing material mixture.

Regarding limitations recited in claims 13 and 15 which are directed to a manner of operating disclosed system, neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP §2114 and 2115. Further, process limitations do not have a patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states “Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim.

Response to Arguments

3. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. MERKLING whose telephone number is (571)272-9813. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on (571) 272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/M. J. M./

Examiner, Art Unit 1795

/Alexa D. Neckel/

Supervisory Patent Examiner, Art Unit 1795